# Collaboration Tools for the GAN

Report of the August 26, 2002 workshop @ Berkeley Lab

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URL - http://www-itg.lbl.gov/Collaboratories/GANMtg/

# Workshop Goal

- Review the collaboration technology needs of a GAN
  - Prepare a straw man proposal for supporting some of the collaboration, communication needs of a prototype GAN
- Convened
  - Accelerator physicists
  - High energy physicists
  - Operations experts
  - Technology tool developers
  - Social scientists that study collaboration

# Agenda

- Introduction to user-centered design
- Accelerator experts
  - Work practices
  - Example GAN prototype opportunities
  - Capabilities needed
- Collaboration technology experts
  - Overview
  - Specific development efforts
  - Security technologies
- Studied specific scenarios and general issues

# Attendees

- Deb Agarwal - LBNL – Host
- Paul Avery - University of Florida
- Nathan Bos - University of Michigan
- George Chin - PNNL
- Terry Disz - ANL
- Hans Frese - DESY
- Miguel Furman - LBNL
- Ray Helmke - Cornell (Wilson Lab)
- Wolfgang Krechlok - DESY
- Stu Loken - LBNL
- Gary Olson - University of Michigan
- Judy Olson - University of Michigan
- Marcia Perry - LBNL
- Massimo Placidi - CERN
- Todd Satogata - BNL
- Mike Stanek - SLAC
- Mary Thompson – LBNL
- Bill Turner - LBNL

# General GAN Observations

- Design phase
  - Scheduled and ad hoc meetings
  - Documents
  - Project management/workflow
  - Code development
- Commissioning
  - Intense continuous work process
  - Instrument testing/troubleshooting

# General GAN Observations

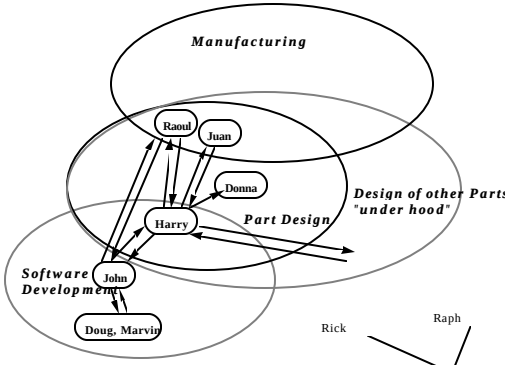
- Operations
  - Shift log
  - Measurement instrument readings/control
  - Meetings
    - Shift change
    - Status update (daily)
    - Maintenance coordination
    - Experimenter liaison
  - Control of accelerator components
  - Continuous status information
- Personnel!

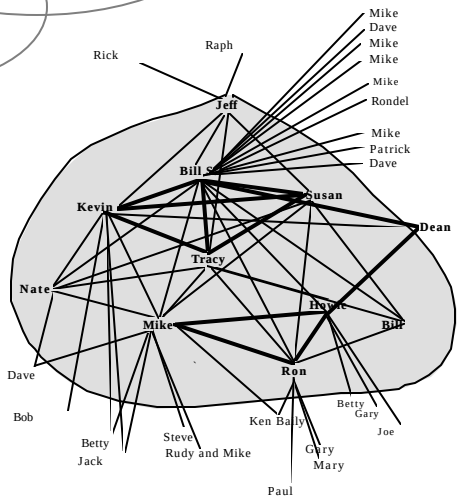
# GAN scenarios

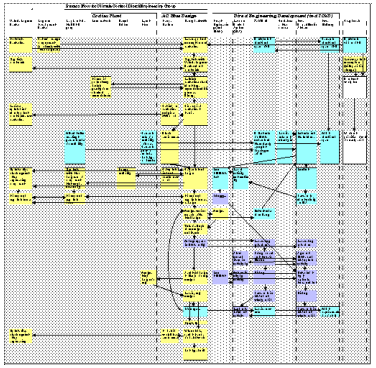
- TTF2
  - DAQ software design
  - Machine development studies
- RHIC/SNS
  - Remote control/diagnosis/commissioning
  - Machine development studies
  - Operations activity information monitor
- LHC
  - Machine development studies

# User centered design

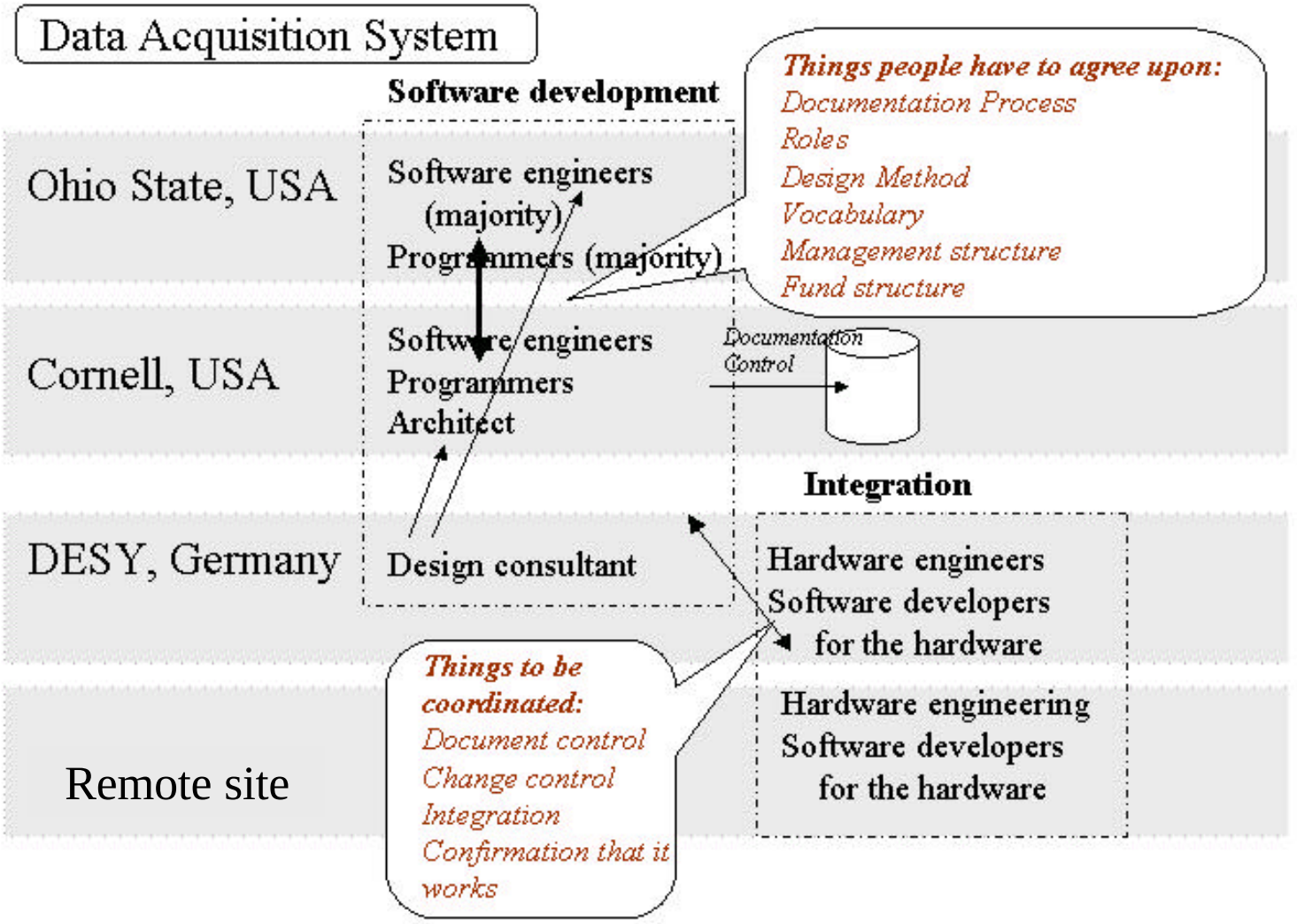
- Extract from users their needs
  - Goals, work, work setting, timing
- Collect from interviews, focus groups, observation
- Using various diagramming techniques



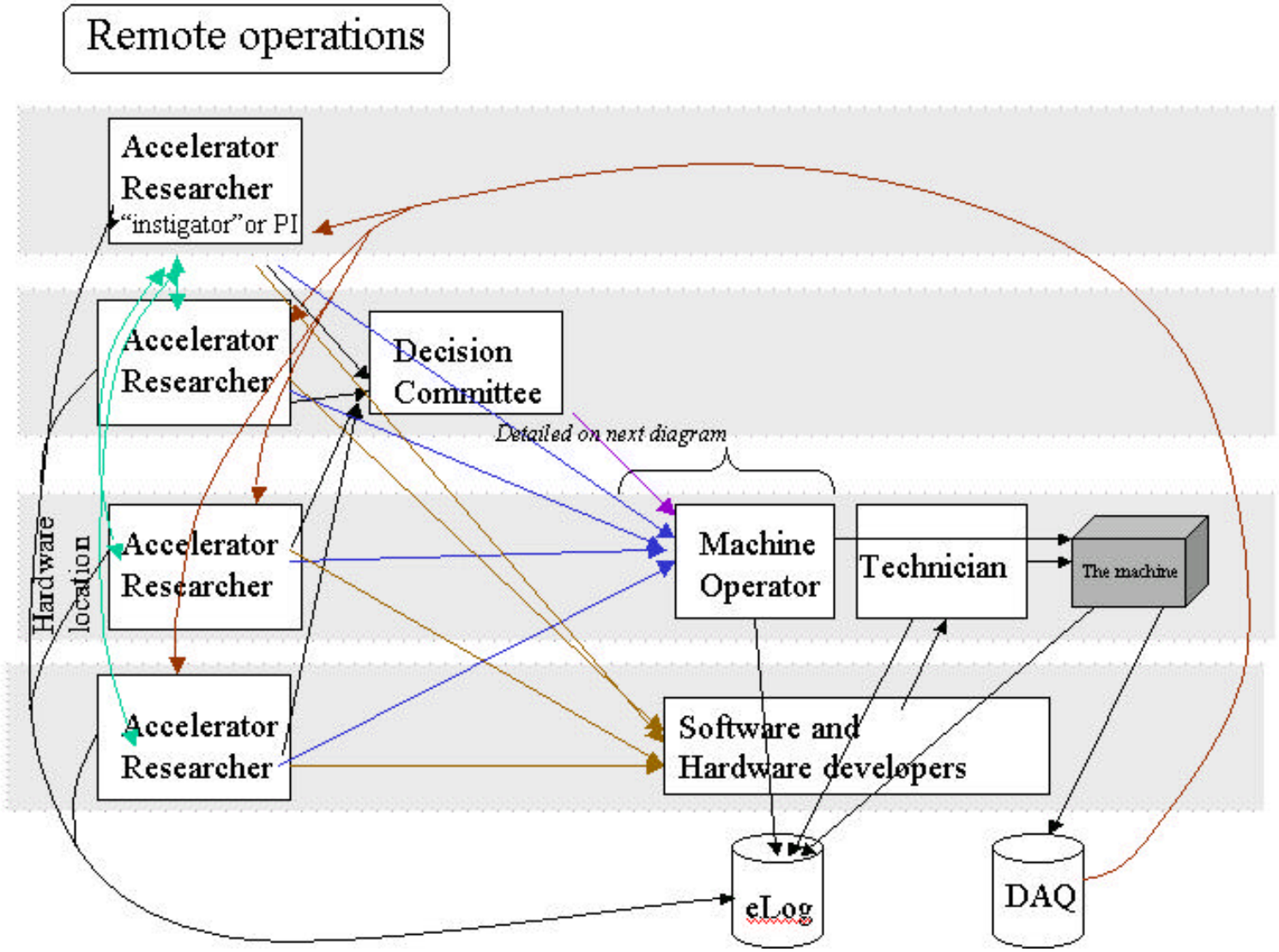



# Detailed scenario #1 DAQ



# Detailed scenario #2
# Machine Development Studies



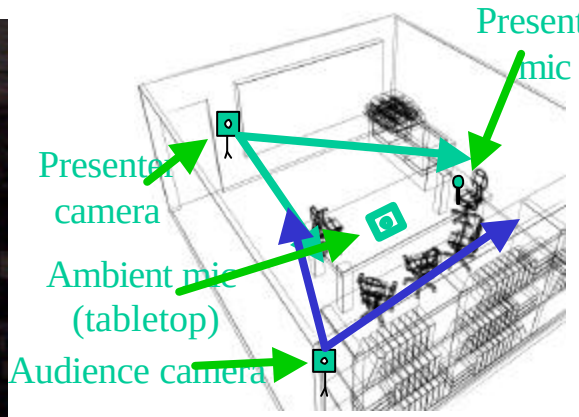
# Collaboration Technologies

- Access to
  - People
  - Instruments
  - Stored information
- Synchronous vs asynchronous
  - Chat, video conferencing, audio streaming
  - Shared objects of conversation (like data)
  - Threaded discussions
  - Electronic notebooks
- Transitions between them

# Collaboration Technologies to support these scenarios

- Meeting support
  - Remote presentations
  - Shared applications/whiteboards
  - Annotation capabilities
  - Natural audio
  - Video of all
  - Easy setup
  - Captured for replay
  - Back channels

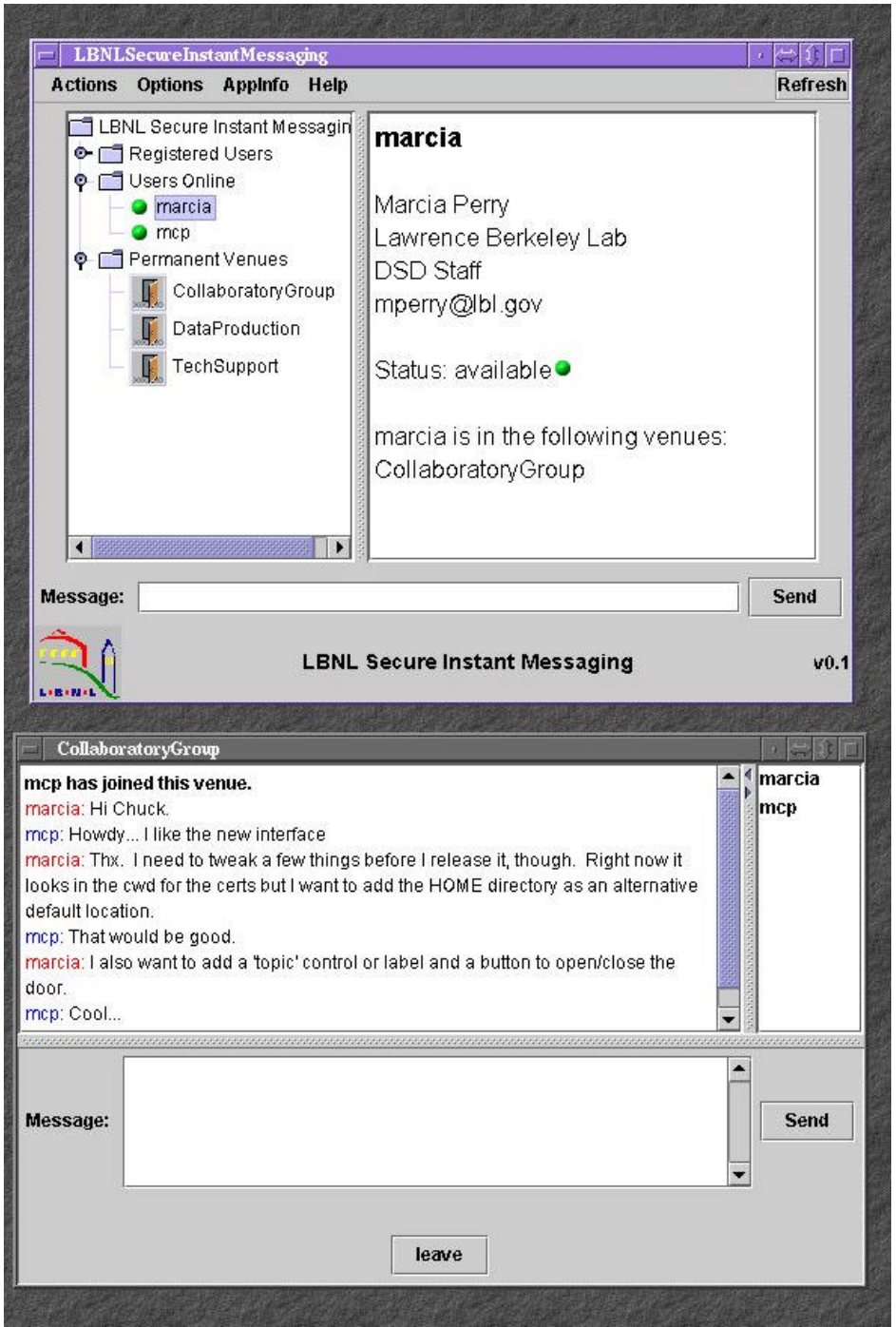
# Access Grid Nodes (ANL)




# Collaboration Technologies to support these scenarios

- Informal meetings
  - Awareness, calendars for finding people
    - With appropriate sensitivities
  - Desktop meeting support
  - Discussion support
  - Messaging support
  - Shared whiteboards

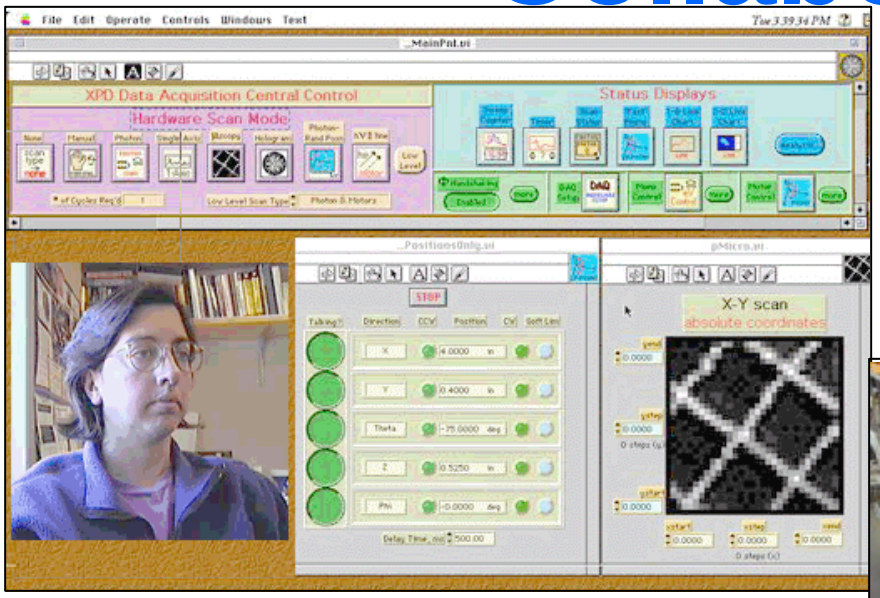
# Secure Messaging (LBNL)

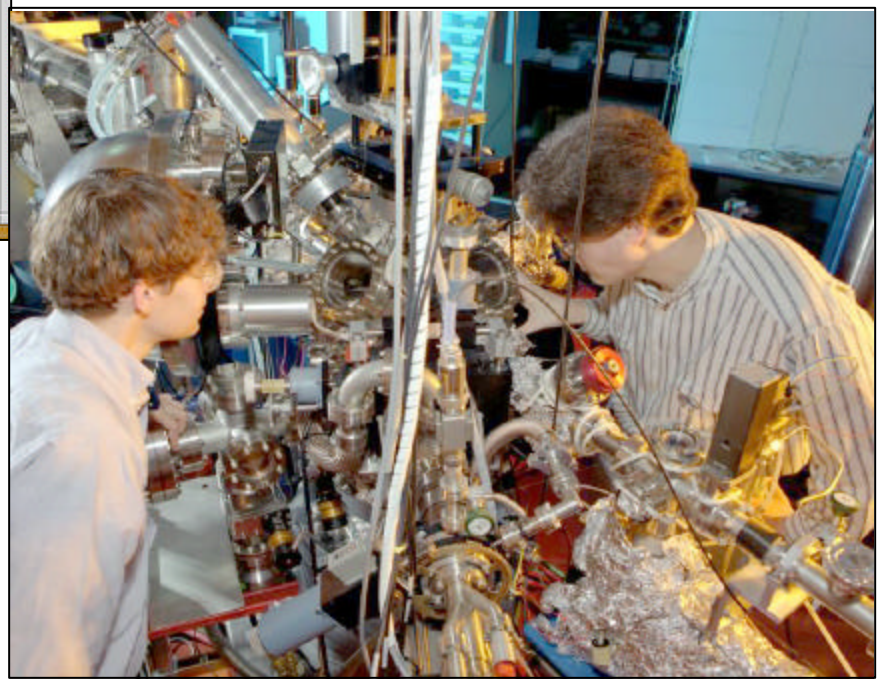


# Collaboration Technologies to support these scenarios

- Remote operations
  - Observation of panel, instruments, people
  - Discussion
  - Remote control of some parameters
    - Instrumentation
    - Data collection
    - Not the beam
  - Auditory communication for operator
    - Nearby video stream

# Spectro-Microscopy Collaboratory

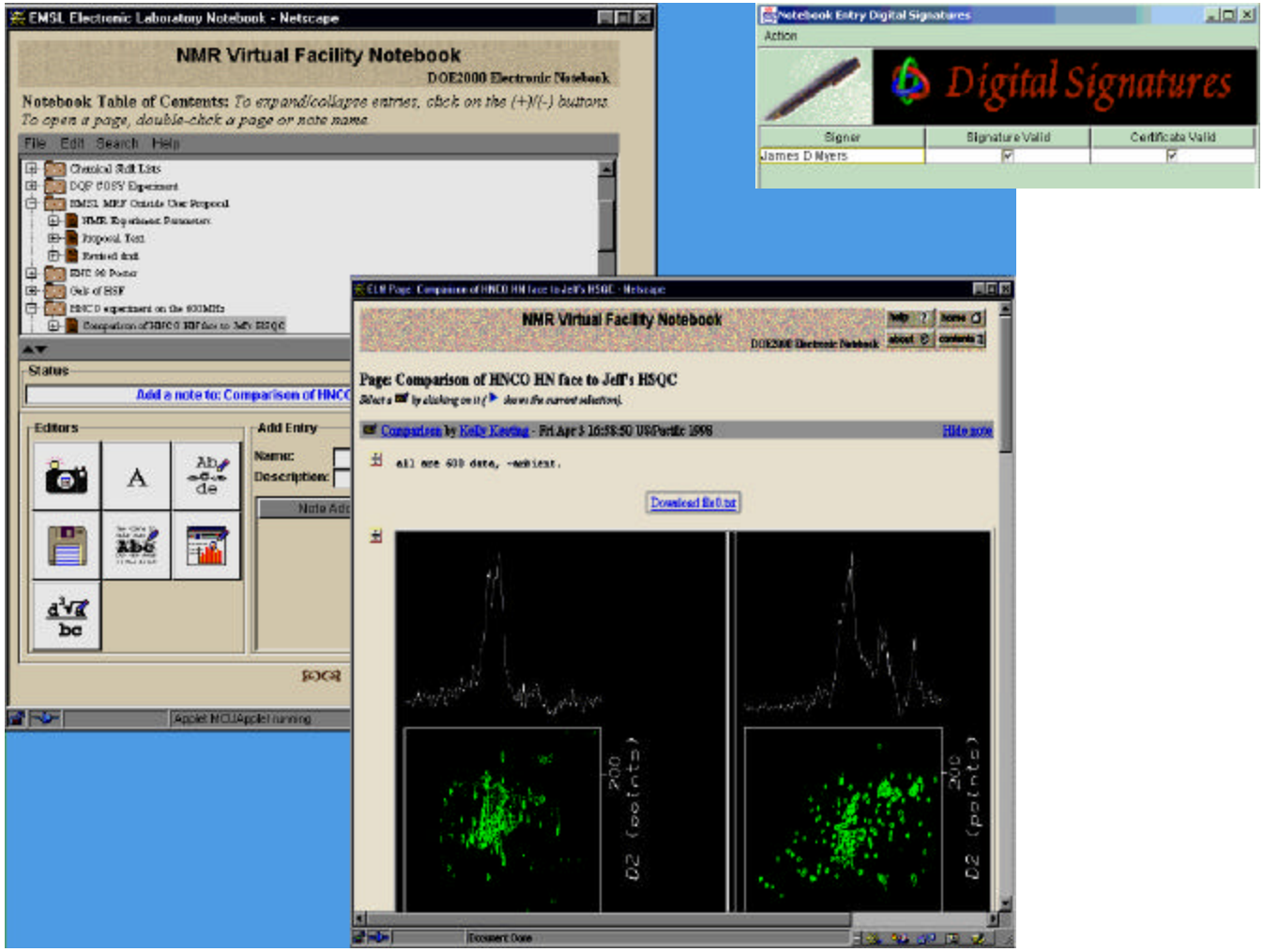


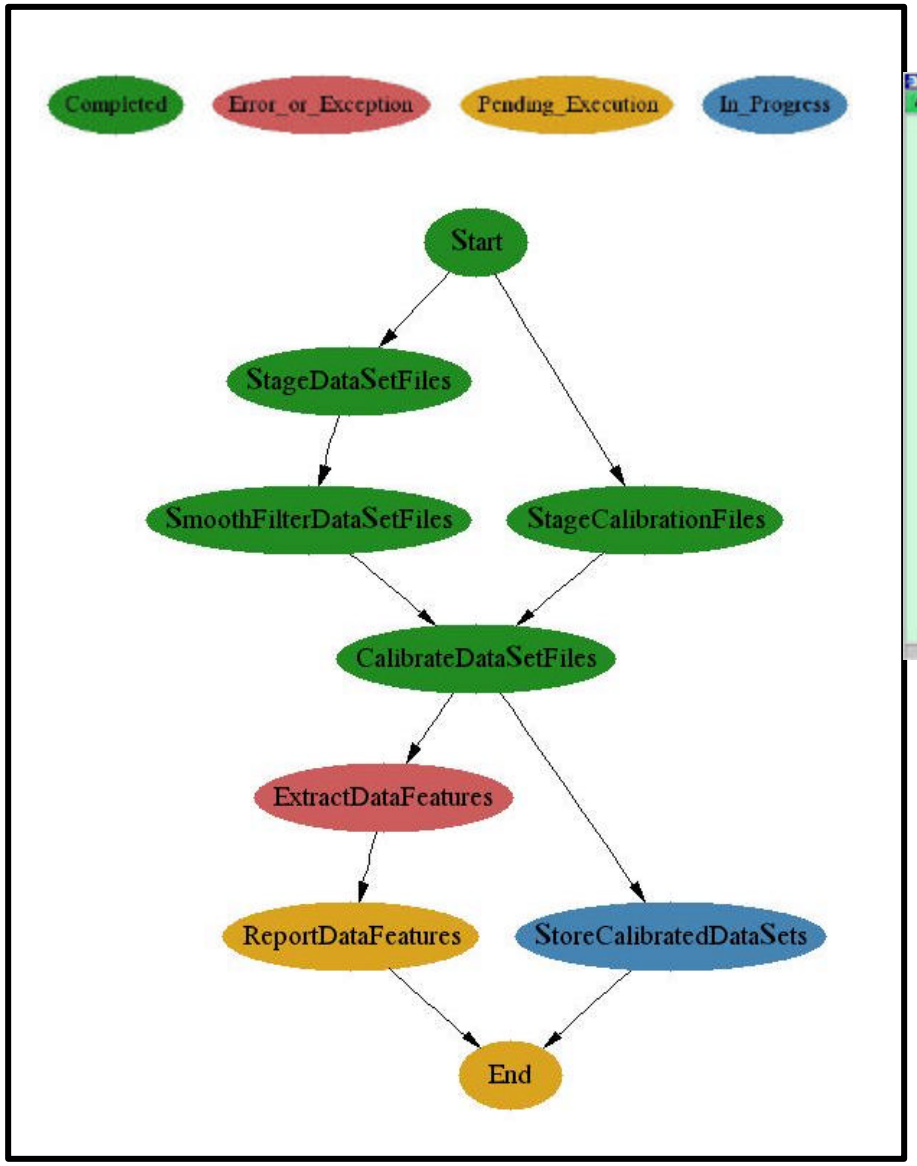
# Collaboration Technologies to support these scenarios

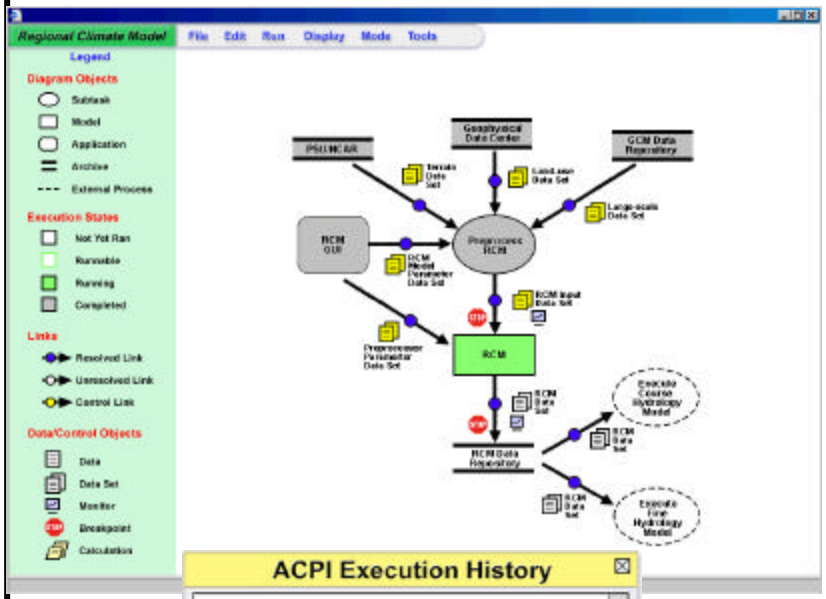
- Asynchoronous communication
  - Electronic notebook
    - Agendas
    - Open issues
    - Notes
  - Annotated capture of meetings
  - Annotated documents and data displays
  - Project management/workflow tracking

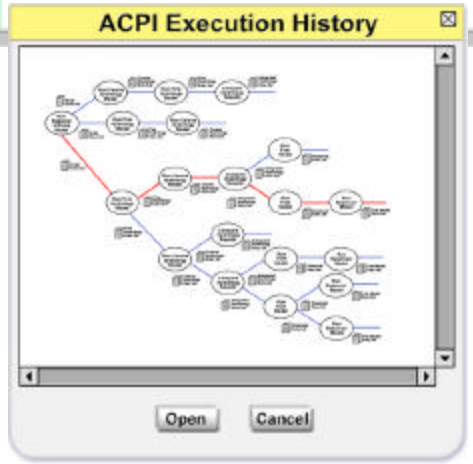
# Electronic Notebook (PNNL)



# Workflow (LBNL,PNNL)



# Security

- Public Key Infrastructure
  - Grid Security Infrastructure
- Kerberos
- Virtual Private Network
- Username/password

Features

- Identification
- Access Control/Authorization
- Guests
- Privacy
- Vulnerabilities
- Ease of use

# Social issues

- Privacy
- Reciprocity
- Ease of use
- Agreed “rules of the road”
- Culture
- Adoption
- Training

# URLs

**Workshop**

http://www-itg.lbl.gov/Collaboratories/GANMtg

**DOE National Collaboratories Program**

http://doecollaboratory.pnl.gov/

**CREW**

http://www.crew.umich.edu

**LBNL Collaboration Technologies**

http://www-itg.lbl.gov/Collaboratories/